

(F)

Patents

See 893  
928  
964  
975

**APPLICATIONS BEING PREPARED**

Philip Morris Incorporated  
Privileged and Confidential

**4 February 1981**

Code 1 - Offensive/Urgent  
Code 2 - Defensive/Urgent  
Code 3 - Offensive/Normal  
Code 4 - Defensive/Normal

0000016334

750 PROCESS FOR IMPROVING FILLING POWER OF EXPANDED TOBACCO

H. Merritt and L. Sykes  
Process Development/Gannon

Tobacco which has been expanded by a conventional expansion process undergoes further increase in filling power when it is given an additional treatment, under certain conditions, with hot air or with superheated steam. This additional treatment is preferably at a lower temperature than the temperature of the first expansion step, and thus can be more easily controlled. The product, while having substantially increased filling power, has been found equally acceptable in subjective smoking tests, to the product without such additional treatment.

FILED WLKT/Kothe/Inskeep  
CODE 2

9-16-76 Disclosure received.  
11-17-77 Disclosure sent to WLKT for application preparation.  
2-16-78 Discussed between Kothe, Merritt, Inskeep.  
7-24-78 First draft application received—forwarded to inventors for review.  
10-5-78 Corrections/comments sent to Kothe.  
11-17-78 Discussed with Merritt and Sykes; Merritt redoing draft.  
12-6-78 Meeting between Kothe and Merritt; Kothe will redraft.  
4-79 References, etc. to Kothe.  
9-5-79 Research data sent to Kothe.  
11-19-79 Discussion between Kothe/inventors re current information, appraisal.  
2-8-80 Memo from Gannon to Kothe re status.  
2-14-80 Kothe says draft before end of February.  
3-3-80 Revised application received. Thorough discussion between inventors/Kothe needed.  
5-8-80 Revised application to Merritt.  
6-18-80 Revised application sent back to Kothe.  
7-2-80 Changes for claims to Kothe.  
9-5-80 Redraft received; to inventor Merritt.  
9-26-80 Corrections, etc. to Kothe.  
11-4-80 Revised draft received—to inventors for review.  
12-23-80 Executed and mailed to WLKT for filing.

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0000016335

774 EXPANDED, STIFFENED STEMS

N. Rainer and D. Siwiec  
Tobacco Materials/Burns/Gannon

Tobacco stems, preferably burley, are treated with a concentrated aqueous solution of a divalent salt of a metal such as calcium, magnesium, zinc, or aluminum. The chloride, acetate, or nitrate salts of said metals are acceptable. The salt impregnated stems are then treated with a concentrated solution of hydrogen peroxide and ammonia followed by washing and drying. Stems treated according to this process maintain their expanded state and have significantly increased filling capacity; for example 150-170 cc per 10 grams for untreated stems.

Related to 791, 797, 983

Hutcheson

CODE 1

4-30-77	Disclosure received.
10-14-77	Literature search requested.
10-14-77	Rainer's comments on prior art received.
11-21-77	Search completed.
2-78	Preparation of application begun.
7-78	Completion report received from inventors.
8-79	Inventors have indicated that additional data from pilot plant expansion studies will be completed by the end of September.
3-10-80	797 combined herewith.
3-16-80	First draft almost complete. Plan to submit to inventors by end of April.
5-11-80	Draft of text given to inventor for review. Inventor returned draft and indicated that additional examples will be available shortly.
6-30-80	Revised draft and examples nearly completed. Inventor continues to generate new data for incorporation in application.
7-23-80	Discussed this application with Gillis and Rainer in view of PM 791. Because of related subject matter, 791 will be incorporated in 774 and the final application will be completed by SAH. A separate application will be filed to cover the more recent improvements generated by Rainer.
8-1-80	791 combined herewith.
8-6-80	Redraft completed--to Rainer for review.
8-15-80	Rainer's comments received--final draft completed.
8-15-80	Draft revised in view of changes and comments.
11-5-80	Final draft completed--to inventors for review.
11-10-80	Final draft to management for review.
12-15-80	Inventors/management comments received.
1-16-81	Application being prepared for filing.

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0000016336

791 EXPANSION PROCESS FOR UNCURED TOBACCO

N. Rainer, G. Bokelman, J. Hearn  
Tobacco Materials/Burns/Gannon

Homogenized green tobacco leaf and/or stem are incubated at about 40° C for 20 hours in the presence of a flow of air. The homogenized leaf cured (hereinafter HLC) is then treated with an alkaline hydrogen peroxide solution followed by washing. The expanded HLC is roasted at about 200° C to achieve a 5% weight loss. the resultant HLC has a significantly increased filling capacity, improved appearance and smoking qualities.

Related to 797, 774, 983

Hutcheson

CODE 3

10-14-77	Disclosure received.
11-77	Search completed.
7-78	Completion report received from inventors.
9-11-79	Search requested from outside firm.
10-15-79	Search received; results being evaluated.
2-8-80	Memo from Gannon re status.
3-13-80	Disclosure to WLKT for application preparation.
6-20-80	Gillis preparing draft.
7-23-80	As a result of discussion with T. Gillis. Application will be pursued by Hutcheson.
8-13-80	Memo to Rainer requesting more info.
1-16-81	Inventor Bokelman supplied information on HCL process; will prepare application to be filed with related cases 774, 797 and 983.

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0000016337

797 PROCESS FOR INCREASING THE FILLING POWER OF TOBACCO  
STEM MATERIAL (OZONE PRETREATMENT)

N. Rainer and D. Siwiec  
Tobacco Materials/Burns/Gannon

Tobacco stems, preferably burley, are treated with a concentrated aqueous solution of a divalent salt of a metal such as calcium, magnesium, zinc, or aluminum. The chloride, acetate, or nitrate salts of said metals are acceptable. The salt impregnated stems are then treated with a concentrated solution of hydrogen peroxide and ammonia followed by washing and drying. Stems treated according to this process maintain their expanded state and have significantly increased filling capacity; for example 150-170 cc per 10 grams for untreated stems.

Related to 791, 797, 983

Hutcheson

CODE 1

4-30-77	Disclosure received.
10-14-77	Literature search requested.
10-14-77	Rainer's comments on prior art received.
11-21-77	Search completed.
2-78	Preparation of application begun.
7-78	Completion report received from inventors.
8-79	Inventors have indicated that additional data from pilot plant expansion studies will be completed by the end of September.
3-10-80	797 combined herewith.
3-16-80	First draft almost complete. Plan to submit to inventors by end of April.
5-11-80	Draft of text given to inventor for review. Inventor returned draft and indicated that additional examples will be available shortly.
6-30-80	Revised draft and examples nearly completed. Inventor continues to generate new data for incorporation in application.
7-23-80	Discussed this application with Gillis and Rainer in view of PM 791. Because of related subject matter, 791 will be incorporated in 774 and the final application will be completed by SAH. A separate application will be filed to cover the more recent improvements generated by Rainer.
8-1-80	791 combined herewith.
8-6-80	Redraft completed--to Rainer for review.
8-15-80	Rainer's comments received--final draft completed.
8-15-80	Draft revised in view of changes and comments.
11-5-80	Final draft completed--to inventors for review.
11-10-80	Final draft to management for review.
12-15-80	Inventors/management comments received.
1-16-81	Application being completed for filing.

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0000016338

827 METHOD OF TREATING GREEN TOBACCO

G. Bokelman  
Tobacco Materials/Burns/Gannon

A method is provided for treating uncured green tobacco whereby the chemical composition of the tobacco can be altered while the need to reconstitute the tobacco is avoided. The method involves expressing protoplasmic juice from green uncured tobacco by means of pressure and thereafter artificially curing the tobacco. The expressed juice may be collected and processed to alter its chemical composition. The processed juice may thereupon be reapplied to tobacco from which juice has been expressed to produce a tobacco product having desired chemical characteristics.

FILED WLKT/Gillis/Inskeep

CODE 2

4-17-78 Disclosure received.  
7-21-78 Preliminary search completed on PM data base and results reported to inventor.  
3-79 Completion report being prepared by inventor.  
9-79 Waiting for completion report and experimental data contained therein--should be ready by 9-15-79.  
9-11-79 Search requested by outside firm.  
10-15-79 Search received; completion report received from inventor.  
11-19-79 Results of search under evaluation; report to be written.  
1-25-80 Assigned to Inskeep.  
2-6-80 Draft disclosure completed.  
2-8-80 Disclosure sent to WLKT for application preparation.  
2-8-80 Memo from Gannon re status.  
6-20-80 Draft application received.  
8-8-80 Corrections for draft to Gillis.  
8-28-80 Redraft received.  
9-9-80 Comments from Keritsis.  
9-15-80 Redraft to Bokelman for review.  
10-15-80 Redraft received--to Bokelman for signing.  
10-29-80 Executed and sent to WLKT for filing.

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0000016339

829 ON-LINE QUANTITATION OF PLASTICIZER IN FILTER RODS

D. Watson and W. Harvey  
Analytical Research/Bourlas/Farone/Lowitz

The device would provide for measurement of absorbed energy at selected microwave frequencies as this energy is directed through the filter rods on a maker. These measurements, once calibrated against plasticizer content of the filter material, would be used through a feedback circuit to control the amount of plasticizer added.

Related to 877.

WLKT/Torrente/Sarofeen

CODE 4

4-24-78	Disclosure received.
8-18-78	This device functions similarly to very close art in-house and in a prior art reference. Under advisement pending further development.
1-80	This case will be reevaluated in view of Steinbrecher case which should be filed soon.
3-7-80	Disclosure sent to WLKT for application preparation. -
4-17-80	Torrente visit scheduled.
6-17-80	Discussed with Torrente.
8-21-80	Asked inventors for more info in order to proceed with application.
1-15-81	Info not received to date.

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0000016340

835 IMPROVED FLAVOR FOR RECONSTITUTED TOBACCO

D. Keel

Flavor Development/Daylor/Meyer

In the manufacture of reconstituted tobacco by the paper-made process, in which the solubles are concentrated and returned to the sheet, it was found that the addition of ammonia to the solubles either with or without heat and/or with or without other additives before recombination with the sheet resulted in an improved flavor of the product making it more tobacco-like.

Hutcheson

CODE 2

5-17-77 Disclosure recieved.  
11-7-77 Search requested.  
11-22-77 Search completed.  
7-17-79 Art sent to inventor--examples requested.  
8-23-79 Asked inventor to organize presently available data and examples for evaluation.  
11-10-79 Discussed with inventor and requested experimental and smoking data.  
12-7-79 Inactivated.  
2-12-80 Reactivated--Following meeting with inventor a memo was sent requesting specific subjective evaluations.  
6-13-80 PM 834 combined herewith; new data submitted by inventor; application being prepared.  
8-15-80 First draft started.

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0000016341



836 BONDING OF POLYPROPYLENE WRAP TO ITSELF BY LASER IRRADIATION

W. Farone, A. Lilly, Jr., P. Martin, and W. Claflin  
Applied Research/Physical Research/Kassman/Farone/Lowitz  
Cigarette Development/Gauvin/Meyer

Techniques for bonding two sheets together at high speed using focussed (2 focal length) CO<sub>2</sub> laser beam. Bonded area around 0.008 diameter. with reflecting foil beneath the wraps speed for bonding was 590 feet/minute with 40-60 watts power.

Sarofeen

CODE 1

5-23-78	Disclosure received.
7-12-78	Search requested from outside firm.
7-28-78	Search received--sent to Farone for evaluation. Final disclosure details expected following testing.
11-1-78	Meeting with Farone et al--special laser has to be ordered.
8-79	Testing now in progress.
11-19-79	Laser has been received and testing is active.
1-24-80	Memo to Farone indicating that work is progressive.
6-27-80	Work is still proceeding--waiting for further details.
9-4-80	Disclosures now in process of preparation by inventors.
1-15-81	Disclosure not received to date.

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0000016342

854 TORUS INJECTION ZONE SEPARATOR

R. Thatcher, H. Odom, R. Edwards  
Engineering/Kay/Pasquine

A tobacco mixture containing lighter and heavier fractions is fed into one side of a housing while an airstream flow is introduced at the other side of the housing and in an upwardly directed flow course so as to cause it to entrain the lighter fraction of the mixture therein, with the heavier fraction falling to the bottom of the housing. A suction lift is maintained at the top of the housing to increase the velocity of the lighter fraction containing air flow outwardly from the housing. The lighter fraction containing air flow is then delivered to a tangential separator unit to recover the lighter fraction. The lighter fraction can, for example, be the laminae material from which cigarette tobacco filler is made.

WLKT/Brandt/Sarofeen

3-78 Disclosure received (disclosure received in March but not logged in until October because it was misplaced by Mr. Sarofeen.  
11-3-78 Partial disclosure made to WLKT--still in development.  
5-15-79 Copy of disclosure sent to inventors for revision.  
8-9-79 Disclosure sent to WLKT for application preparation.  
9-24-79 PM 841 combined herewith.  
11-20-79 Final draft now in preparation.  
11-29-79 Working draft of combined 841/854 received.  
12-1-79 Draft sent to inventors for review.  
1-24-80 Brandt is revising draft per discussions.  
9-4-80 Redraft expected soon.  
1-15-81 Redraft expected soon.

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0000016343

857 LASER OPTICAL SYSTEM

E. Grollimund  
Engineering/Kay/Pasquine

A precision lens centering and focusing structure which comprises novel features for providing precise control and stability for a laser optical system.

WLKT/Torrente/Sarofeen

CODE 2

11-27-78 Disclosure received.  
3-79 Search to be done when indicated.  
11-19-79 John Torrente is scheduled to complete the general laser search soon. This case may then be advanced for action once again.  
1-24-80 General laser search is complete. Case will now be evaluated for disposition.  
3-7-80 Disclosure sent to WLKT for application preparation.  
4-17-80 Torrente visit to advance this case.  
6-17-80 Discussed with Torrente.  
9-4-80 Final draft being prepared.  
1-15-81 Scheduled for reevaluation.

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0000016344

866 ACID CURING OF TOBACCO

D. Gooden and G. Bokelman  
Tobacco Materials/Burns/Gannon

A process for artificially curing mature green tobacco is provided wherein the tobacco is immersed in an acidic medium and incubated therein at at least room temperature until the desired color develops. Incubation at pH 1.5 to 3.5 at about 50°C for as little as 3 hours may be sufficient to eliminate the green color and green smoke taste and odor of the tobacco.

FILED WLKT/Gillis/Inskeep  
CODE 2 OR 4

1-15-79 Disclosure received.  
3-79 Completion report being prepared by inventors.  
8-23-79 Inventors indicate completion report almost finished.  
9-11-79 Search requested from outside firm.  
10-15-79 Search received; results being evaluated and report to be written.  
10-79 Completion report received from inventor.  
1-25-80 Assigned to Inskeep.  
2-8-80 Memo from Gannon re status; disclosure being prepared.  
2-19-80 Draft disclosure completed.  
2-26-80 Disclosure sent to WLKT for application preparation.  
6-20-80 Draft application received.  
8-8-80 Corrections for draft to Gillis.  
8-28-80 Redraft received.  
9-9-80 Comments from Keritsis.  
9-15-80 Keritsis' comments to Gillis; redraft to Bokelman for review.  
9-30-80 Redraft to Gooden for review.  
10-21-80 Application received--to Bokelman for executing.  
11-17-80 Application to Gooden for executing.  
12-1-80 Application executed and sent to WLKT for filing.

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0000016345

884 TOBACCO CURING METHOD

D. Gooden, G. Bokelman, and G. Keritsis  
Tobacco Materials/Burns/Gannon

An artificial method of curing green tobacco is provided wherein the tobacco is exposed to sulfur dioxide gas. Curing can be effected by placing the tobacco in an airtight container, introducing sulfur dioxide gas into the container and thereafter closing the container and maintaining the tobacco in the resulting sulfur dioxide atmosphere until the desired color is achieved.

FILED WLKT/Gillis/Inskeep  
CODE 2

4-4-79 Disclosure received.  
6-20-79 Asked Bokelman for analytical or subjective results.  
6-28-79 Note from Bokelman re additional work.  
6-79 Search performed in our files--intend to proceed with draft.  
9-11-79 Search requested by SAH from outside firm.  
9-27-79 Disclosure sent to WLKT.  
10-12-79 Transcribed disclosure received from WLKT for verification.  
10-15-79 Search received; results being evaluated.  
10-26-79 Corrected transcript sent to WLKT; waiting for disclosure PM 827 and 866.  
2-8-80 Memo from Gannon to Kothe re status; Kothe confirms above note.  
2-26-80 Disclosures 827 and 866 now at WLKT.  
6-20-80 Draft application received.  
8-8-80 Corrections for draft to Gillis.  
8-28-80 Redraft received.  
9-9-80 Comments from Keritsis.  
9-30-80 Redraft to Gooden for review.  
10-21-80 Application received--to Bokelman for executing.  
11-17-80 Application to Gooden for executing.  
12-1-80 Application executed and sent to WLKT for filing.

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0000016346

**886 CURING GREEN TOBACCO LEAVES BY PHOTBLEACHING**

D. Gooden and G. Bokelman  
Tobacco Materials/Burns/Gannon

Green tobacco is cured by photobleaching followed by thermal browning. Photobleaching is preferably effected after incubation in vapors of an organic liquid or steam.

Related to 884, 827, 866.

FILED WLKT/Gillis/Inskeep  
CODE 2

4-4-79 Disclosure received.  
6-20-79 Asked Bokelman for analytical or subjective results.  
6-28-79 Note from Bokelman re additional work.  
6-79 Search performed in our files.  
9-11-79 Search requested by SAH from outside firm.  
9-27-79 Disclosure sent to WLKT.  
10-11-79 Transcribed disclosure received from WLKT for verification.  
10-15-79 Search received; results being evaluated.  
10-25-79 Corrected transcript sent to WLKT; waiting for disclosure PM 827 and 866.  
2-8-80 Memo from Gannon to Kothe re status; Kothe confirms above note.  
2-26-80 Disclosures 827 and 866 now at WLKT.  
6-20-80 Draft application received.  
8-11-80 Corrections/comments on draft to Gillis.  
8-28-80 Redraft received.  
9-9-80 Comments from Keritsis.  
9-15-80 Keritsis' comments to Gillis; redraft to Bokelman for review.  
9-25-80 Redraft received--to Bokelman for review.  
10-21-80 Application received--to Bokelman for executing.  
11-17-80 Application to Gooden for executing.  
12-1-80 Application executed and sent to WLKT for filing.

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0000016347

**893** CHIRAL 4' AND 4',5'-SUBSTITUTED NICOTINE ANALOGS

W. Edwards  
Chemical Research/Sanders/Osdene

The invention relates to chiral 4' and 4',5'-substituted nicotine analogues and novel processes for their production. The compounds are useful as pharmacological, agrichemical and veterinary agents.

FILED D&O/Hutcheson

CODE 4

5-3-79	Disclosure received.
7-19-79	Disclosure sent to D&O for patentability study.
8-14-79	Patentability study received—filing recommended—sent to inventor for review.
10-4-79	Attorney-inventor conference to review Depaoli's opinion, answer questions and determine strategy.
10-22-79	Inventor is actively pursuing synthesis and experimental work to complete data necessary to prepare an application.
4-80	Inventor hopes to have information completed very soon.
6-30-80	Inventor indicated that data is complete and a report should be completed by July 3.
1-13-81	Report on insecticidal activity to Depaoli.
1-28-81	Conference with attorney and inventor to review and execute application.
1-30-81	Executed and filed in PTO.

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0000016348

903 USE OF TOBACCO DUST IN AN RL-TYPE SHEET MAKING PROCESS

D. Lowitz and G. Keritsis  
Applied Research/Farone/Lowitz  
Tobacco Materials/Burns/Gannon

A method for employing tobacco dust in a paper-making process for the preparation of reconstituted tobacco is disclosed. The method for employing the tobacco dust comprises admixing tobacco dust with a film-forming material to form a mixture, treating the mixture to form agglomerated particles that have the appearance and physical properties of fibers, admixing the agglomerated particles with a tobacco-parts slurry and then forming the slurry into a sheet by means of a paper-making process, drying and then shredding the resultant reconstituted tobacco sheet. The smoking material obtained by such method is also described.

Related to 653 and 689 and portions of 641.

FILED WLKT/Reinisch/Inskeep  
CODE 2  
5-18-79 Disclosure received.  
9-20-79 PM data base search completed.  
12-3-79 Disclosure sent to WLKT for application preparation.  
12-11-79 Examples and notebook pages sent to WLKT.  
1-4-80 Lowitz says invention has been reduced to practice with help of Keritsis--will write up methods.  
1-23-80 Additional example sent to WLKT.  
3-12-80 Request by phone from Reinisch for reference copies and more information.  
3-20-80 Questions relayed to inventor Keritsis.  
4-15-80 Additional information sent to Reinisch.  
7-16-80 Preliminary draft received--to inventors for review.  
8-5-80 Corrections for draft to Reinisch.  
8-26-80 Redraft received--to inventors.  
9-12-80 Extensive revisions called for; corrections to Reinisch.  
12-4-80 Redraft received--to inventors for review.  
12-11-80 Corrections for draft to WLKT.  
12-22-80 Executed and returned to WLKT for filing.

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0000016349



905 REORDERING OF DIET

C. Hoelzel and T. Laszlo  
Physical Research/Kassman/Farone/Lowitz

A method of reordering expanded tobacco wherein fully reordered tobacco is mixed with freshly expanded tobacco prior to entering the reordering cylinder. From the reordering cylinder the mixture is sent to a bulking silo (first in-first out type) from which a portion is removed at the exit for use in the "fully reordered" tobacco mentioned above.

INACTIVE WLKT/Inskeep

CODE 1

3-21-79 Disclosure received.  
6-79 Preliminary search completed—sent to inventor for review.  
6-22-79 Inventor's comments received.  
7-2-79 Discussed with Farone—awaiting test results.  
1-23-80 Considering disposition: Hoelzel.  
4-15-80 Note to Kassman suggesting need for action. No prospect of pilot plant test to verify this invention.  
9-30-80 Disclosure to WLKT for application preparation.  
12-80 Situation presented to Laszlo; he will see Gannon.  
1-21-81 Inactivated.

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907 INTERFERENCE FEEDBACK DEVICE

J. Gregory III  
Engineering/Kay/Pasquine

A web sectioning apparatus wherein web sectioning occurs through engagement or interference of the cutting edges of a rotatable knife assembly with the surface of a drum and wherein an indicator is provided for generating a signal indicative of the force resulting from such interference.

FILED WLKT/Torrente/Sarofeen

6-79 Disclosure received.  
8-9-79 Disclosure sent to WLKT for application preparation.  
1-24-80 Torrente visit is being planned for advancing this case.  
4-17-80 Torrente visit to advance this case.  
6-27-80 Final draft in preparation.  
8-13-80 Revised draft to WLKT for final preparation.  
9-4-80 Redraft expected soon.  
9-7-80 Executed and mailed to WLKT for filing.

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0000016350

928 PREPARATION OF N-TERT BUTYL-p-MENTHANE-3-CARBOXAMIDE  
(WS-14)

R. Comes and S. Haut  
Chemical Research/Sanders/Osdene

This invention provides an improved process for synthesizing carboxamides which involves reacting 3-p-menthyl halide with magnesium to form 3-p-menthylmagnesium halide Grignard reagent, and reacting the Grignard reagent with hydrocarbyl isocyanate at a temperature below about -20°C to form N-hydrocarbyl-p-menthane-3-carboxamide product. The product comprises a mixture of geometric isomers in which the 3-p-menthyl:3-p-neomenthyl weight ratio is at least 9:1.

Related to 1005.

D&O/Hutcheson

- 10-22-79 Disclosure received - inventor notified.
- 10-31-79 Assigned to Hutcheson.
- 11-9-79 Search conducted by TIF in 1978 sent to inventors for evaluation.
- 1-25-80 Awaiting information from possible inventor Van Auken.
- 3-17-80 Memo to inventors asking for any new data; 4-80 inventors indicated that data will be ready soon.
- 6-30-80 Inventors continue to persue this area of work; no new data available at this time.
- 9-9-80 Haut has indicated that they are makig some progress in controlling the synthesis to the extent that the desired isomer is obtained in improved yield.
- 11-25-80 Disclosure to Depaoli for application preparation.
- 12-8-80 Additional info received from Haut and forwarded to Depaoli.
- 1-16-81 Draft application received--to inventors/management for review.
- 1-29-81 Inventors comments received; application will be redrafted.

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0000016351

930 DIGITAL DRY WEIGHT COMPUTER AND SENSOR CALIBRATOR

D. Phan, W. Sweeney, and J. Nghiem  
Engineering/Taylor/Kay/Pasquine

Determination of the moisture of a stream of tobacco is carried out with a microprocessor calibrator which receives the incoming sensor gauge signal and converts same to a calibrated or true moisture signal, the microprocessor including a memory for storing sets of calibration data corresponding to different tobacco mixtures and access means for conditioning the memory to make available the set of data of the particular tobacco mixture in the tobacco stream.

WLKT/Torrente/Blish

10-31-79 Disclosure received - inventors notified.  
12-79 Assigned to Blish.  
2-25-80 Inventors interviewed.  
4-2-80 In-house prior art search completed--results sent to inventors.  
4-3-80 Disclosure sent to WLKT for patentability evaluation and application preparation.  
6-24-80 First draft completed, sent to inventors for review  
6-27-80 Corrections for first draft to WLKT.  
7-10-80 Redraft received--to inventors for review and more information.  
11-19-80 Reminder sent to inventors concerning need for additional information.

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0000016352

### 933 SPIRAL-WOUND PACKED BED BIOCATALYTIC REACTOR

H. Bravo  
Biomaterials/O'Donohue/Farone/Lowitz

The invention involves a spiral-wound packed bed reactor consisting of a tube containing a flexible foam which may be smooth or contain indentions. On this foam are adhered segmented packets of encapsulated microorganisms which perform specific bio-chemical reactions. The encapsulated cells are segmented to facilitate and control flow rates and prevent compaction.

WLKT/Gillis/Hutcheson

CODE 1

11-2-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
2-11-80	Inventor to organize data for disclosure.
3-19-80	Met with T. Gillis of WLKT to discuss disclosure and state of the art.
7-22-80	Memo to inventor with copy of pertinent paper for review of data and other prior art papers; memo to B. Sartor requesting state-of-the-art search on biocatalytic reactors.
8-1-80	Search results received from TPI are being assessed. Several patents, numerous papers and thesis appear to be of interest and will be ordered.
1-81	Gillis indicated that she will have some comments regarding all the cases related to immobilization shortly.

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0000016353

935 MATERIALS AND METHOD FOR THE MANUFACTURE OF PELLETS  
(PI)

H. Bravo  
Biomaterials/O'Donohue/Farone/Lowitz

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets, the cell or enzyme solution is reacted with celite 545 (filter aid), glutaraldehyde, and polyethyleneimine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 936 and 937.

WLKT/Gillis/Hutcheson

CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
3-5-80	State of the art search requested of TPI and Gillis; review papers sent to inventor for review.
3-19-80	Meeting with T. Gillis of WLKT to discuss invention and state of the art.
3-21-80	Questions on process to inventor.
3-80	Search efforts continue; TPI preliminary search completed.
6-30-80	Papers received. Will attempt to organize and prepare research report in July.
7-24-80	Search results sent to inventor and T. Gillis; have requested that Gillis determine patentability and whether to proceed with application.
8-25-80	Discussed with Gillis during her visit. Need to meet with inventor again to discuss search results.
10-20-80	Celite information to Gillis.
1-81	Gillis indicated that she will have some comments regarding all the cases related to immobilization shortly.

\* \* \* \* \*

0000016354

936 MATERIALS AND METHOD FOR THE MANUFACTURE OF PELLETS  
(PI)

H. Bravo  
Biomaterials/O'Donohue/Farone/Lowitz

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets, the cell or enzyme solution is reacted with celite 545 (filter aid), POLY(acrylamide acrylic acid) saturated in ethanol, and polyethylene imine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 935 and 937.

WLKT/Gillis/Hutcheson  
CODE 2

11-5-79 Disclosure received - inventor notified.  
12-79 Assigned to Hutcheson.  
1-8-80 Discussed with inventor and manager. Must investigate prior art before processing.  
3-5-80 State of the art search requested of TPI and Gillis; review papers sent to inventor for review.  
3-19-80 Meeting with T. Gillis of WLKT to discuss invention and state of the art.  
3-21-80 Questions on process to inventor.  
3-80 Search efforts continue; TPI preliminary search completed.  
6-30-80 Paper received. Will attempt to organize and prepare search report in July.  
7-22-80 Search results sent to inventor and T. Gillis; have asked Gillis to assess art and determine whether application should be filed.  
8-25-80 Discussed with Gillis during her visit. Plan to schedule meeting with inventor to discuss search results.  
10-20-80 Celite information to Gillis.  
1-81 Gillis indicated that she will have some comments regarding all the cases related to immobilization shortly.

\* \* \* \* \*

0000016355

## 937 SAPONIFIED UNSATURATED FATTY ACIDS

H. Bravo

Biomaterials/O'Donohue/Farone/Lowitz

The invention is a method for producing pellets containing live microbial cells or active enzymes. To make the pellets the cell or enzyme solution is reacted with celite 545 (filter aid); saponified unsaturated fatty acids i.e. sodium oleate, linoleic acid, linoleic acid, Joy liquid soap, White Dove liquid soap, etc. and polyethyleneimine, which are added sequentially. The end product consists of highly permeable pellets in which the protein on the outer wall of the microorganism or on the enzyme has reacted with the polymeric ingredients added.

Related to 935 and 936.

WLKT/Gillis/Hutcheson

CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-8-80	Discussed with inventor and manager. Must investigate prior art before processing.
3-5-80	State of the art search requested of TPI and Gillis; review papers sent to inventor for review.
3-19-80	Meeting with T. Gillis of WLKT to discuss invention and state of the art.
3-21-80	Questions on process to inventor.
3-80	Preliminary search completed by TPI; papers ordered.
6-30-80	Papers received. Will attempt to organize & prepare search report during July.
7-22-80	Search results sent to inventor and T. Gillis; she will determine patentability.
8-25-80	Discussed with Gillis. Will schedule meeting with inventor to discuss search results.
10-20-80	Celite information to Gillis.
1-81	Gillis indicated that she will have some comments regarding all the cases related to immobilization shortly.

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0000016356

939 DENITRIFICATION OF SEL BY FEDBATCH FERMENTATION

H. Bravo

Biomaterials/O'Donohue/Farone/Lowitz

A fed-batch fermentation process for reducing nitrate content of aqueous tobacco extract is disclosed. Tobacco extract is rapidly and efficiently denitrified in accordance with the process by feeding the extract into a fermentor containing appropriate denitrifying microorganisms while providing necessary nutrients and maintaining conditions under which the nitrate is reduced via a dissimilatory pathway. The denitrated extract may be applied to tobacco from which soluble solids have been extracted to form reconstituted tobacco for use in smoking products.

WLKT/Gillis/Hutcheson

CODE 2

11-5-79	Disclosure received - inventor notified.
12-79	Assigned to Hutcheson.
1-18-80	Prior art search underway.
2-11-80	Inventor to organize data for disclosure.
4-3-80	Note to file advising proceeding; Farone/Lowitz concur.
4-16-80	Memo to inventor requesting specific information on process.
5-80	Preliminary examples supplied by inventor. Mr. Semp recommended waiting for formal report before preparing application.
6-9-80	PM 938 combined herewith since process is particularly useful in conjunction with Fed-Batch Denitrification; search completed and sent to inventor.
7-31-80	First revision of examples completed and sent to inventor, O'Donohue, and Lowitz designating specific information required to complete the examples.
9-10-80	Preliminary draft begin; awaiting response from inventor/Lowitz concerning memo of 7-31.
9-22-80	Work on first draft begun.
10-7-80	Letter from Gillis asking for meeting with inventor to obtain more information.
10-9-80	Inventor requested to organize data from pilot plant runs.
10-20-80	Analytical data to Gillis.
11-21-80	Draft application received--to inventor for review.
12-16-80	Inventor's comments on draft to WLKT.
1-7-81	Redraft received--to inventor/management for review.
1-14-81	Meeting with Farone, O'Donohue, Bravo, Semp & Gillis to discuss overall strategy of Fed-Batch process. Recommendation should be ready soon.

\* \* \* \* \*

0000016357



943 RAPID REORDERING WITH AN APRON DRYER

F. King, Jr. and P. Sherman  
Engineering/Taylor/Kay/Pasquine

(1) Rapid reordering is accomplished by spraying a fine mist of water onto the free falling tobacco down stream from the discharge doffer. Tobacco carpet is one leaf thick at this point for free fall velocity is much greater than traveling speed on conveyor. Tobacco carpet thickness is inversely proportional to speed for a given flow rate. (2) Either front and/or back spray nozzles can be used to spray onto the falling tobacco. (3) spray nozzles are spaced across the tobacco carpet so that overlapping (double) spray is accomplished. (4) Quantity of reorder is controlled by quantity of water sprayed through nozzles. some external means to precisely control the quantity of water is employed (i.e. meter pumps, etc.). A feedback signal from a moisture meter could be employed to control the quantity of water used. (5) No fans are used to circulate moisture laden air through the tobacco. (6) Key to invention is the application of a mist at a point where the carpet is essentially one leaf thick. If a thicker carpet is employed, wetting of the top leaves will occur and result in possible mold growth or non-uniform moisture application.

WLKT/Brandt/Sarofeen -

12-7-79 Disclosure received--inventors notified.  
1-21-80 Assigned to Sarofeen.  
2-80 PM data base search completed--results to inventors for review.  
6-27-80 Disclosure sent to WLKT for preparation of application.  
8-5-80 Disclosure and in-house search to WLKT.  
9-4-80 Discussed with Brandt; meeting set for October.  
10-22-80 Request from Brandt for more information--request forwarded to Kay and inventors.  
12-8-80 Additional info to Brandt.  
1-15-81 Draft expected soon.  
12-8-80 Additional info to WLKT.

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0000016358

946 AIR FLOW MEASURING DEVICE

R. Gaudlitz  
Engineering Services/Mutter/Gannon

Related to USSN 967250

WLKT/Torrente/Sarofeen

1-3-80 Disclosure received--inventor notified.  
1-21-80 Assigned to Sarofeen.  
3-7-80 Disclosure sent to WLKT for application preparation.  
9-4-80 Impacts on a prior case--further consideration needed.  
12-1-80 Memo to inventor requesting further data.  
1-15-81 Further data received--interview with inventor needed to clarify invention.

\* \* \* \* \*

950 APPLYING ADHESIVE TO TIPPING PAPER

F. Sherwood and T. Van Auken  
Tobacco Services/Osmalov/Gannon  
Physical Research/Kassman/Farone/Lowitz

Adhesive can be applied to tipping paper in a skip-tip pattern using nozzles with a steady flow. This can be achieved by either of two methods. Method A: A masking belt, with the intermittent part of the skip-tip pattern cut in it as openings, passes between a set of nozzles and the tipping paper. The masking belt is then drawn away, and a second set of nozzles completes the skip-tip pattern by applying adhesive to areas requiring an uninterrupted laydown of adhesive. Method B: The skip-tip pattern is obtained by spraying a stream of adhesive droplets through an electrical system which puts a charge on the droplets, and then deflects the droplets from the paper where dry areas are required using an electric field.

WLKT/Kothe/Inskeep

CODE 2

2-1-80 Disclosure received--inventors notified.  
3-14-80 Disclosure sent to WLKT for application preparation.  
3-19-80 In-house search completed--results to inventors/Kothe.  
6-20-80 Remarks from T.V. on search.  
1-14-81 Outside search completed; questions being readied by WLKT.

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0000016359

**953** IMPROVED METHOD FOR SELECTIVE DENITRATION VIA ELECTRO-DIALYSIS

G. Keritsis  
Tobacco Materials/Burns/Gannon

WLKT/Gillis/Hutcheson

2-19-80 Disclosure received—inventor notified.  
7-1-80 Preliminary disclosure sent to T. Gillis for review.  
7-23-80 Met with inventor and T. Gillis to discuss procedure; will probably file CIP of PM 867B. Ms. Gillis will prepare and file as soon as data is completed by Mr. Keritsis.  
9-8-80 Mr. Keritsis submitted new experimental data which has been organized and will be sent to Gillis by 9-10.  
12-10-80 Instructions to Gillis to pursue application.  
1-81 Aspects of this disclosure will form part of 867A CIP which is being prepared by Gillis.

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**954** CIGARETTE MAKER MOISTURE AND TEMPERATURE CONTROL

J. Remington  
Engineering/Kay/Pasquine

Object is to manipulate the dry bulb temperature and relative humidity of the air to obtain the desired moisture and temperature conditions of the tobacco in the maker.

Related to SN 111521.

WLKT/Torrente/Sarofeen

2-20-80 Disclosure received.  
2-21-80 Memo to Kay requesting supplemental disclosure information.  
2-27-80 Kay took back disclosure to add additional information.  
3-31-80 In-house search completed.  
4-11-80 Meeting with Engineering to discuss follow-up details.  
6-27-80 Disclosure sent to WLKT for patent application preparation.  
9-4-80 Draft in final states of preparation.  
1-15-81 Torrente expects to deliver application before 3-1-81.

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0000016360

955 LOW DELIVERY CIGARETTES

G. Keritsis and N. Rainer  
Tobacco Materials/Burns/Gannon

A carbon rod would be fabricated in the same general manner described in PM 622 with the exception that the diameter of the rod would be 8mm (essentially full cigarette diameter). The rod, as a segment measuring 10 to 40mm in length would be wrapped in abutment with the tobacco column, and preferably also in abutment on its opposite end with a CA filter plug. This is illustrated in the enclosed Figure 1. It is conceivable, however, that in some embodiments the carbon rod may also serve as a filter, and might be utilized without a CA filter plug. This is illustrated in the enclosed Figure 2. The carbon rod serves as a filter which traps TPM. When the coal reaches the carbon rod, it burns in a manner resembling the tobacco column, but gives no TPM of its own origin and little of the condensed TPM. The effect is to provide a type of controlled profile cigarette wherein the last few puffs are as mild as the initial puffs.

Related to PM 622.

WLKT/Gillis/Inskeep

3-25-80 Disclosure received--inventor notified--sent to WLKT for application preparation noting that this case should be filed promptly while PM 622 is still pending.  
9-11-80 985 combined herewith--identical disclosures.  
9-17-80 985 disclosure to WLKT.  
9-80 WLKT awaiting more data--equipment for making samples not in yet.  
6-16-80 Formal inquiry by N.R. about status.  
12-12-80 Data for examples to WLKT.  
1-14-81 Rainer says file, option to refile when machine-made results ready.

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0000016361

956 SKIP GAP GUM MONITOR

J. Wheless and W. Shields  
Engineering/Taylor/Kay/Pasquine

A method for laying down on cigarette tipping overwrap, repetitively, in consecutive order, a pattern of glue which comprises voids. The voids lie positioned in glued areas along a continuous web of tipping overwrap referenced in relation to the borders of tipping sections to be cut. A stroboscopic light source is triggered by an intermittently acting tipping cutting apparatus to provide a "photograph" of the position of the glue pattern along the length of the web in reference to a reference guide. This "photograph" shows how the voids in the glue pattern relate to the location of cuts to be made along the length of the web to make individual overwraps. An adjustment mechanism is used to move the "glue pattern photograph" into desired register with the reference guide while the machine is in operation.

FILED Sarofeen

3-28-80 Disclosure received--inventors notified.  
6-27-80 Searched at USPTO; patent copies ordered.  
7-16-80 First draft started.  
9-4-80 Second draft in process.  
12-17-80 Redraft to inventors for review.  
1-15-81 Executed and mailed to USPTO.

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957 LOW COST ULTRALOW PRESSURE RELIEF VALVE

W. Sweeney  
Engineering/Taylor/Kay/Pasquine

An ultralow pressure relief is disclosed. Sealing fluid is held in place by capillary forces inside capillary tube. When pressure in tube exceeds capillary forces, sealing fluid is forced into reservoir, protecting pressure gage from overpressurization.

Blish

3-28-80 Disclosure received--inventor notified.  
4-29-80 Outside search requested.  
5-5-80 Inventor interviewed.  
7-11-80 First draft application completed--to inventor for review.

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0000016362

958 DYNAMIC CIRCUMFERENCE GAUGE

C. Irving  
Tobacco Services/Osmalov/Gannon

The invention uses strain gauges mounted a spring, of suitable spring constant, to detect the diameter of cigarettes. The change of diameter of the cigarettes causes a change in the voltage output of the strain gauges when a cigarette is passed between the spring and a suitable guideblock. This device can be used to measure the diameter of cigarettes dynamically, that is while they are being produced.

FILED Blish  
4-3-80 Disclosure received--inventor notified.  
4-80 Assigned to Blish.  
8-5-80 Inventor interviewed.  
8-14-80 In-house search initiated.  
9-10-80 Search results to inventor for review.  
9-18-80 First draft completed.  
10-1-80 Redraft to inventor for review.  
12-11-80 Final draft to inventor/management for review.  
1-15-81 Executed and mailed to USPTO.

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960 FORMULATION OF A COLA-TYPE SOFT DRINK

A. Lendvay  
S.D. Applications Laboratory/Will/Wakeham

A dry, pourable powder instant beverage mix includes phosphoric acid as flavorant and acidulant, with at least an equivalent amount of monocalcium phosphate. A source of carbonation may be part of the dry formulation, or the powder may be added to carbonated water or to water which is subsequently carbonated.

Related to 962.

Inskeep  
4-8-80 Disclosure received--inventor notified.  
4-80 Assigned to Inskeep.  
7-14-80 Further disclosure received.  
10-27-80 First draft completed--to inventor for review.

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0000016363

**962**    CARBONATED INSTANT SOFT DRINK

A. Lendvay  
S.D. Applications Laboratory/Will/Wakeham

Related to 960.

Inskip  
4-16-80    Disclosure received--inventor notified.  
5-7-80    Questions to inventor.  
6-20-80    Further disclosure received.

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**963**    SELF CLEANING PAPER PATH SUPPORT POSTS

D. Brookman and E. Grollimund  
Engineering/Kay/Pasquine

A system for utilizing motion of tipping web to effect swarf removal from support posts.

WLKT/Sarofeen  
4-29-80    Disclosure received--inventors notified.  
6-27-80    Sent to WLKT for preparation of application.  
9-4-80    Draft expected soon.  
1-15-81    Draft expected soon.

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0000016364

964 SMOKING COMPOSITIONS

H. Grubbs and Y. Houminer  
Chemical Research/Sanders/Osdene

This invention provides tobacco and non-tobacco smoking compositions which contain a heterocyclic-hydroxy-substituted carboxylate compound as a flavorant additive.

Spinn-Off of 920

FILED D&O/Hutcheson

4-29-80 Disclosure logged in  
5-29-80 Examples completed and forwarded to Depaoli for preparation of application.  
6-16-80 Depaoli called regarding questions on first draft; have responded and expect draft any day.  
7-7-80 First draft received--to inventors/manager for review; additional experimental data on aldehydes requested; will hold up filing until info available.  
9-3-80 Additional examples to D&O; final application to be prepared.  
9-18-80 Proposed claim received from Depaoli--to inventors for review.  
10-13-80 Final draft to inventors/management for review.  
10-24-80 Revised draft to Depaoli for finalization.  
11-5-80 Executed and returned to D&O for filing.

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0000016365



968 REACTION FLAVORS FOR SMOKING PRODUCTS

L. Wu and J. Swain  
Flavor Development/Daylor/Meyer

Reducing sugars are reacted with ammonia in the presence of a trace amount of certain amino acids to produce reaction flavors for use in smoking products and particularly those having a high content of tobacco stems.

Related to PM 801 filed April 1979.

Hutcheson

5-22-80 Disclosure received--inventors notified.  
6-30-80 Have discussed with inventor; plan to persue immediately.  
8-14-80 First draft completed; to inventors/management for review and more examples.  
9-2-80 Met with inventors to discuss draft. Substantial changes to be made; awaiting additional examples for inclusion in application.  
11-80 Additional examples submitted by inventors.  
1-16-81 Redraft completed--to inventors/management for review.  
1-27-81 Conference with inventors to correct draft. Awaiting management comments.

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970 LOW DELIVERY CIGARETTE

L. Stewart  
Cigarette Develoment/Gauvin/Meyer

This invention consists of a cigarette with a thin, hollow tube of a noncombustible, nontoxic material that extends from approximately 5mm from the mouth end of the filter to approximately 10mm short of the end of the tobacco segment. As the cigarette is smoked, smoke enters the tube during the initial puffs reducing dilution and giving the impression of a strong flavored cigarette. After the first several puffs, the tube is melted shut and normal dilution occurs. The object is to increase the flavor of the cigarette during the initial puffs.

Blish

5-29-80 Disclosure received--inventor notified.  
6-18-80 In-house search completed.  
7-24-80 Prior art discussed with inventor; additional data requested.  
1-16-81 First draft completed.

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0000016366

**972** IMPROVEMENT OF LASER PERFORATOR

E. Cashwell  
Engineering/Kay/Pasquine

Related to 974.

WLKT/Torrente/Sarofeen

7-7-80 Disclosure received--inventor notified.  
9-4-80 Inventor is adding to the disclosure.  
9-20-80 Received additional information needed to prepare application.  
1-15-81 974 and 998 combined herewith; work on first draft begun.  
1-21-81 Disclosure to WLKT for application preparation.

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**973** CIGARETTE WITH SELECTOR/SEGREGATOR

C. Higgins and G. Patron  
Engineering Services/Mutter/Gannon

INACTIVE WLKT/Saforeen

7-9-80 Disclosure received--inventors notified.  
8-11-80 Disclosure material to WLKT.  
12-11-80 Inactivated per discussions with Higgins.

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**975** PROCESS FOR THE CONVERSION OF CYCLIC ALIPHATIC A,B-UNSATURATED KETONES TO OXYACIDS

W. Edwards III  
Chemical Research/Sanders/Osdene

This invention provides a process for the conversion of an alicyclic alpha,beta-olefinically unsaturated ketone compound to an acyclic oxycarboxylic acid product which contains at least one less carbon atom per molecule than the ketone starting material. The conversion involves ozonation of the alicyclic alpha,beta-olefinically unsaturated ketone in an aqueous alcohol reaction medium, followed by a heating step.

FILED D&O/Inskeep  
URGENT

7-16-80 Disclosure received--inventor notified.  
7-23-80 Disclosure to Depaoli for application preparation.  
8-8-80 First draft received.  
8-25-80 Inventor's comments on draft to D&O.  
9-2-80 Redraft received--to inventor for review.  
9-19-80 Executed and mailed to PTO.

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0000016367

979 HOLLOW TUBE CIGARETTE FILTER

W. Dwyer  
Physical Research/Kassman/Farone/Lowitz

Smoking article has a filter mouthpiece with ventilation holes located near the mouth end of filter material. Locating ventilation hole near the end of filter material reduces the amount of change in smoke to ventilation air ratio as smoking article is consumed. Hollow tube prevents the smokers mouth from occluding ventilation holes.

FILED Blish

CODE 1

8-12-80 Disclosure received--inventor notified; prior art search started.  
8-26-80 Results of search to inventor for review; first draft started.  
9-4-80 Second draft completed--to inventor for review.  
11-14-80 Final draft to inventors and management for review.  
12-1-80 Management comments received.  
12-18-80 Executed and mailed to USPTO.

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983 PROCESS FOR INCREASING THE FILLING POWER OF TOBACCO MATERIALS

N. Rainer and D. Siwiec  
Tobacco Materials/Burns/Gannon

Objects: To increase the filling power of tobacco stem materials by an economical process; to reduce the TPM delivery of stem materials; to improve the subjective smoking qualities of stem materials.

Related to 791, 794 and 797

Hutcheson

8-25-80 Disclosure received--inventors notified.  
12-80 Draft application being prepared.

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0000016368

984 METHOD FOR SUBDIVIDING A BEAM

P. Martin and E. Stultz  
Engineering/Kay/Pasquine

A means of subdividing a laser beam with no loss of power. The multiple beams simultaneously perforate the paper so that the perforations do not vary in relative position as the paper oscillates in position.

WLKT/Sarofeen

CODE 2

8-25-80 Disclosure received--inventors notified

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986 POWER METER

E. Stultz, M. Barnette, W. smich  
Engineering/Pasquine/Kay

Object: Power will be maintained at a given level without variation concerns due to line voltage changes, gas flow changes, and/or any fluctuations in other laser parameters including environmental conditions. Description: Use of a Power Meter output from an end mirror type to feed an electronic signal to increase or decrease laser power to a present level and thereby maintain and control laser output power. With this device a detector of holes in a web of laser perforated paper can be used to accurately control the quality and/or pressure drop of holes laser perforated into the web of paper by feeding back this signal to control the stabilized laser power.

WLKT/Torrente/Sarofeen

9-9-80 Disclosure received--inventors notified.

1-21-81 Disclosure to WLKT for application preparation.

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988 OPTICAL POROSITY SYSTEM

N. Nunnally  
Engineering Services/Mutter/Thomson

Dual channels of collimated light are beamed through web perforations. Photo diods are exposed to the transmitted light and provide a quality photo current proportional to a value of total porosity.

WLKT/Torrente/Sarofeen

9-16-80 Disclosure received--inventor notified.

11-17-80 Compared with 929 by Blish.

1-21-81 Disclosure to WLKT for application preparation.

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0000016369

990 NON-COMBUSTIBLE CARBON FILTER

N. Rainer and C. McClung  
Tobacco Materials/Burns/Gannon

This invention consists of a filter made from crimped paper which is pyrolyzed by passign through a heated dye. This filter removes total particulate matter (TPM) more efficiently than cellulose acetate filters and does not effect the gas phase as does activated charcoal filters.

Blish

9-16-80 Disclosure received--inventors notified.

10-30-80 Further information received.

1-26-81 First draft completed.

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991 VACUUM CONDITIONER SYSTEM

J. Davis, Jr. and H. Wilkerson  
Engineering/Pasquine/Kay

This invention locates temperature elements in the vacuum conditioner probe tips. Also, automatic valves are in series with vacuum header connections. During the vacuum conditioning process, the elements measure temperatures in the probes inbeded in the product and automatically operate the control valves accordingly. These valves may or may not operate according to the automatic cycle appropriate to the type of product.

WLKT/Torrente/Sarofeen

9-18-80 Disclosure received--inventors notified.

9-24-80 Assigned to Sarofeen.

1-21-81 Disclosure to WLKT for application preparation.

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0000016370

992 AUTOMATED DE-CHOKER DEVICE

J. Gregory III  
Engineering/Pasquine/Kay

This invention replaces the existing fixed screen in the forming chimney of cigarette making machines with a rotary air screen which is normally flush with the fixed chimney wall. The device is estimated to increase machine utilization approximately two percent by eliminating down time from manual clearing of tobacco chokes. A tobacco feeder for supplying a number of cigarette makers utilizes a variable speed conveyor belt and a programable flap system to minimize tobacco recirculation and hence breakage when less than all makers are being supplied.

Blish  
9-18-80 Disclosure received--inventor notified.  
9-24-80 Assigned to Blish.  
1-26-81 First draft completed.

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995 LASER TEMPERATURE STABILIZATION AND DEW POINT CONTROL SYSTEM

E. Grollimund  
Engineering/Pasquine/Kay

A method of increasing laser power output per unit of input power by controlling and adjusting air humidity and temperature and oil temperature.

WLKT/Sarofeen  
9-23-80 Disclosure received--inventor notified; assigned to Sarofeen.  
1-15-81 996 combined herewith.  
1-21-81 Disclosure to WLKT for application preparation.

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0000016371

**1000** MODULAR CONVEYOR GUIDE AND SYSTEM UTILIZING SAME

H. Gonzalez  
Engineering/Pasquine/Kay

A modular conveyor guide comprising first and second end walls and a connecting top wall having first, second and third regions adapted to guide first, second and third conveyors.

FILED WLKT/Torrente/Sarofeen

10-28-80 Disclosure received--inventor notified.

11-7-80 Torrente here--disclosure given to him for application preparation.

12-30-80 Executed and filed by WLKT.

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**1001** FILTER PLUG IMPRESSER

J. Wheless  
Engineering/Pasquine/Kay

A system of filter plug transport drums carrying peripherally spaced ceramic inserts having headed wires arranged longitudinally for heat impressing grooves into filter plug surfaces. An advantage is gained in that drums of large diameter on several drums of small diameter arranged in series provide a preselected time dwell interval which allows sufficient time for exposing each plug to hot wires long enough to make a proper impression in high production put-through.

WLKT/Torrente/Sarofeen

11-13-80 Disclosure received--inventor notified.

1-21-81 Disclosure to WLKT for application preparation.

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**1005** SYNTHESIS OF N-t-BUTYL-p-MENTHANE-3-CARBOXAMIDE

T. Van Auken  
Physical Research/Kassman/Farone/Lowitz

Related to 928.

D&O/Hutcheson

11-80 Disclosure received.

11-25-80 Disclosure to Depaoli for application preparation.

12-12-80 Analytical data to Depaoli.

1-13-81 Draft received--to inventor for review.

1-26-81 Inventor/management comments received and forwarded to Depaoli.

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0000016372

1007 MANUFACTURE OF FLUTED PLUGS

A. Gillespie, K. Stover, and W. Sanderson  
Engineering/Taylor/Kay/Pasquine

The invention is the addition of a system of rollers to a filter making machine to deform an otherwise round plug into a desired shape.

WLKT/Torrente/Sarofeen

12-10-80 Disclosure received--inventors notified.

1-21-81 Disclosure to WLKT for application preparation.

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0000016373



0000016374